



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,088	05/24/2006	Hubert Lang	LANG ET AL-1 PCT	8713
25889	7590	04/28/2010		
COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576			EXAMINER SAVAGE, JASON L	
			ART UNIT 1784	PAPER NUMBER
			MAIL DATE 04/28/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,088	Applicant(s) LANG ET AL.	
	Examiner JASON L. SAVAGE	Art Unit 1784	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-23 is/are pending in the application.
- 4a) Of the above claim(s) 15-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4, 6, 10 and 12 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Seth et al. (US2004/0110021).

Regarding claim 12, Seth teaches coating materials by cold-spraying a particle mixture of an alloy material, a hard material such as carbide and/or or soft material such as a lubricant or graphite (par[0011]). Regarding the limitation that the coating is an anti-friction coating, the recited limitation is an intended use which does not provide the claimed inventions with a patentable distinction over the prior art.

Seth is silent to the soft and/or hard phase elements forming a solid solution or bond with the matrix, however since Seth teaches the same soft and hard phase materials as claimed and forming the coating by a substantially similar method such as

Art Unit: 1784

cold gas-dynamic spraying (par[0011]), it is the position of the Examiner that the claim limitation of forming a solid solution or bond would have been met.

In the alternative, it would have been obvious to have formed the anti-friction coating by employing a cold gas-dynamic spraying process which would result in the hard and soft phase materials being incorporated and bonded to the matrix material with a reasonable expectation of success.

Regarding claim 2, Seth teaches that it is known to employ particle sizes between 1-50 microns (par[0019]).

Regarding claim 3, Seth is silent to the bond thickness, however since Seth teaches applying the same materials using a substantially similar method, one of ordinary skill would expect the bond thickness would fall within the claimed range.

Regarding claim 4, Seth teaches that nickel and iron are known to be suitable for use as matrix elements in anti-friction sliding coatings [0028].

Regarding claim 6, Seth teaches as soft phase materials include graphite (par[0011]).

Regarding claims 10, Seth teaches the hard phase materials may be selected from materials such as carbides (par[0011]).

Claim Rejections - 35 USC § 103

Claims 5, 7-9, 11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seth et al (US 2004/0110021).

Art Unit: 1784

Regarding claim 5, 8 and 11, Seth is silent to the matrix element being present in an amount between of at least 55% or the soft phase proportion is within the claimed range. However, it would have been obvious to include any amount of the matrix material and soft phase materials with a reasonable expectation of success. Absent a teaching of the criticality or a showing of unexpected results the claimed fibrous matrix materials concentration, it would not provide a patentable distinction over the prior art.

Regarding claim 7, Seth does not recite the claimed materials, however it teaches similar soft phase material lubricant such as graphite. It would have been obvious to have used similar and alternate soft phase materials including those claimed by Applicant with a reasonable expectation of success.

Regarding claim 9, while Seth teaches the use of hard phase particles such as carbide, it does not recite the recited phase elements. However it would have been obvious to one of ordinary skill in the art to have used any carbide material including carbides of the recited elements with a reasonable expectation of success.

Regarding claims 13-14, Seth does not exemplify an embodiment wherein at least two coatings are applied however it teaches varying the concentration in the coating from one surface to the other (par[0013]). As such, it would have been obvious to have provided a second coating having a different compositional composition than the first coating with a reasonable expectation of success.

Response to Arguments

Applicant's arguments with respect to claims 2-13 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON L. SAVAGE whose telephone number is (571)272-1542. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Savage/
Examiner
4-9-10

/Jennifer C. McNeil/
Supervisory Patent Examiner, Art Unit 1784